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INFLUENCE OF STUDY HABITS ON ACADEMIC PERFORMANCE OF STUDENTS IN MATHEMATICS IN JUNIOR HIGH SCHOOLS IN THE KUMASI METROPOLIS

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A Project Report in the Department of Educational Leadership, Faculty of Education and Communication Sciences, submitted to the School of Graduate Studies, University of Education, Winneba, in partial fulfilment of the requirements for award of the Master of Arts (Educational Leadership) degree

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DECLARATION

STUDENT'S DECLARATION

I GRACE ADDO, declare that this project report, with the exception of quotations and references contained in published works which have all been identified and acknowledged, is entirely my own original research work, and it has not been submitted, either in part or whole, for another degree in this University or elsewhere

SIGNATURE:……

DATE; ……

SUPERVISOR'S DECLARATION

I, hereby declare that the preparation and presentation of this project work was supervised in accordance with the guidance with the guidelines on supervision of project report as laid down by the University of Education, Winneba.

NAME OF SUPERVISOR: DR. KOFI ASIAMAH YEBOAH

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DEDICATION

To my four children; Irene Serwaa Addo, Kwabena Kootin Addo, Nana Akua Addo and Ewura Ekua Addo and my lovely husband Mr. James Yaw Addo.

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ABSTRACT

The study investigated the influence of study habit on academic performance of students in Mathematics in junior high schools in the Kumasi Metropolis. The study adopted descriptive survey research design where data were collected from Mathematics Teachers and Students in Weweso M/A JHS, Aprade JHS, Kentinkrono JHS and Emmanuel Methodist JHS, Anwomaso JHS. This through random sampling sampled 278 students and 10 Mathematics Teachers. The study designed two sets of questionnaire for data collection, one set for teachers and other set for students. The data collected were entered into SPSS, version 21.0 for analysis. The study found out that majority of the students attended all Mathematics classes; solved mathematics past questions, learnt or studied mathematics in quite environment, did mathematics exercises without coping from others and had personal mathematics textbooks. However, the study also revealed that majority of the students did not revise their Mathematics notes as required, did not contact Mathematics Teachers for help on difficult topics and did not ask questions in class. The number of students with good study habits towards Mathematics was 2.8% higher than those with bad study habit. Watching of television was the main challenge to the study of Mathematics at homes. Mathematics Teachers identified inadequate mathematics textbooks, larger class sizes and small time allocation for the Mathematics on the school timetable as a challenge that hinder effective teaching for Mathematics. Students with good study habits performed better in Mathematics than those with bad study habit. The study recommends that parents should be sensitized on when to allow their children to watch television at homes. Students should be encouraged to ask questions in class. Adequate Mathematics textbooks should be provided.

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CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

Education is the purposive, conscious or unconscious, psychological, sociological, scientific and philosophical process, which brings about the development of the individual to the fullest extent and also the maximum development of society in such a way that both enjoy maximum happiness and prosperity (Kumar NCR & Ahmad, 2008). Through education, knowledge, skills, values, beliefs and habits are transferred from one person to another (Dewey, 2010). Education generally, is aimed at developing the talent and enhancing capabilities of the learners for personal and national development. Schofield (1999) noted that education helps people develop their potentials, making them better persons to contribute to socio-economic development of their countries.

However, the outcome of learning generally is affected by many factors and the most important ones include study habits of students like regularity in class, punctuality, attentiveness etc. Study habits refer to behaviours exhibited towards the learning process particularly during preparations for tests or learning academic materials (Nagaraju, 2004). Study habits play a pivotal role in the learning process of the students and that partly influences the outcome of learning. Study habits and academic achievement are identified to be positively related (Cerma & Pavlivushechenko, 2015).

Study habit is influenced by many factors and these include demographic characteristics of the students such as sex and age of the student (Robinson, 2005); study environment which is the condition under which the study is done (Benedicto, 2013); time management (Kim, 2013) and teaching and learning resources (Boado, 2012). How

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students manage their time is critical to their academic performance. Students who spend substantial amount of their time on non-academic activities have little time to study and mostly study few days to examination (Venturina, 2014). However, students who devote adequate time for preparation before examination are said to have good study habit. Although, students need time to be in class and to study, they also need time for family, friends, social activities, and time to be alone. This makes time management very important to study habits and academic performance (Kim, 2013).

Aside, time management, study environment affects study habits of students. Study environment include conducive and comfortable place for the students to study without noise or distractions (Kim, 2013). Students learn better in conducive atmosphere with available teaching and learning materials but external influences such as excessive noise and frequent movement of people to and fro put them off from effective studies. Kim (2013) has established positive effects of study environments on study habits and calls for good learning environment such as well-furnished library or study rooms with good ventilation or air condition and less noise in all schools, especially the Senior High Schools where some students are boarders.

Resources such as textbooks, internet, journals, magazines, video tapes, maps, encyclopedias, globes, drawing sets and library resources are important determinants in study habits of students (Kim, 2013). These resources if available in schools help students develop positive study habits but their absence undermines study habits of students. Boado (2012) noted that adequate physical facilities and accessible library services help the students in their learning and this positively affects the study habits of students.

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Study habits are numerous including Buzan mind map, rehearsal and role learning, reading and listening, visual imagery, acronyms and mnemonics, examinations strategies, spacing and PQRST (Preview, question, Read, Summary and Test) (Carey, 2015; Werner, 1970). Study habits method mostly used is influenced by stage of education of the child. In Ghana, education is formally categorized into three stages. The first stage is termed as Basic Education, which consists of the Kindergarten, the Primary Schools, and the Junior High schools. The second stage namely, Secondary Education entails the Senior High Schools, the Senior High Technical Schools and the Technical and Vocational Schools. Finally the third stage referred to as Tertiary Education covers the Universities, the Polytechnics and the Colleges (Atuahene, 2013). The Junior High School is most important stage in students' lives since performances at the BECE form the bases upon which they are selected and placed into various courses of study at the Secondary School level (Atuahene, 2013). Those who could not make it either terminate their education all together or re-sit for the BECE for better performance. Thus, study habit of students at Junior School is important to be studied.

Among the subjects studied at Junior High School, performance in Mathematics has been declining over the year with some sizeable number of students failing in the subject in Kumasi Metropolis (WAEC, 2016). This is because students in Ghanaian schools perceive mathematics to be the most difficult subject (Awanta, 2009). The subject is perceived to be difficult due to its aversive teaching style, difficulty in following instruction, difficulty in understanding the subject and remembering equations and solving them (Gafoor & Kurukkan, 2015). Therefore, students' interest in solving mathematical problems, attending mathematics classes and mathematical calculations are dropping

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steadily over the years; leading to poor academic performance in the subject (Awanta, 2009). This study therefore investigated the effects of study habits on academic performance of students in the Junior High Schools in the Kumasi Metropolis with specific focus on Mathematics.

1.2 Statement of the Problem

Good academic performance is desired by students, teachers, parents, school authorities and the policy makers. It is documented that academic performance is affected by many factors including study habit of students (Pumat-at & Hamed, 2016). Mathematics is one of the core subjects which are taught in Junior High Schools, however, the abysmal performance of students in the subject over the years is raising eye-brow among the stakeholders. For example, about 31% and 35% of students in Kumasi Metropolis who sat for BECE in 2017 and 2018 respectively obtained grade 9 in Mathematics (WAEC, 2018). The grades are worst when only public schools are considered (WAEC, 2018). Some have attributed poor performance in Mathematics to the study habits of students. Robinson (2010) noted that study habit is subject specific, indicating that the same study habit method cannot be used for both English Language and Mathematics for example.

Despite the importance of study habits in students' academic performances, little attention has been given to it in Ghana (Baquiran, 2011). Moreover, previous studies on the effects of study habits on academic performance have varied results depending on how habit was measured. For example, Schuman et al. (1985) concluded that study habits do not affect academic performance whiles Cerma and Pavlivushechenko (2015) found positive effects of study habits on academic performance. These differences in outcomes make studies on effects of study habits on academic performance inconclusive. There is

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the need for further research into this area in order to properly assess the impact of study habits on academic performance, especially in Kumasi Metropolis where little is known about this subject matter. This study therefore assesses the effects of study habit on academic performance of students in Junior High Schools in Kumasi Metropolis and with specific focus on Mathematics.

1.3 Purpose of the Study

This study sought to investigate the influence of study habits on academic performance of students in Mathematics in Junior High Schools in the Kumasi Metropolis.

1.4 Objectives of the Study

This study assessed the effects of study habits on academic performance of students in the Junior High Schools in Kumasi Metropolis.

The study specifically sought to achieve the following:

1. To identify study habits of students towards Mathematics in Junior High Schools in the Kumasi Metropolis.
2. To identify the challenges students face in the study of Mathematics as a subject in Junior High Schools in the Kumasi Metropolis.
3. To determine the effects of study habits on students' academic performance in the Mathematics in Junior High Schools within the Kumasi Metropolis.

1.5 Research Questions

Based on the above objectives, the study formulated and answered the following questions;

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1. What are the study habits of students towards Mathematics in Junior High Schools in the Kumasi Metropolis?
2. What challenges do students face in the study of Mathematics in Junior High Schools in the Kumasi Metropolis?
3. What are the effects of study habits on students' academic performance in Mathematics in Junior High Schools in the Kumasi Metropolis?

1.6 Significance of the Study

The study is significant for four groups of people, namely teachers, students, parents, and future researchers. Firstly, teachers can effectively assist their students to achieve academic excellence when they know challenges the students face when studying Mathematics as a subject. This study would bring to bear the challenges students face when studying Mathematics. This would help teachers to encourage their students to adopt appropriate study habits for Mathematics to enhance their performances in the subject.

Secondly, every student aims at achieving academic excellence, especially in the Basic Education Certificate Examination (BECE). The students can realize this aim when they know the study habits that best enhance performance in Mathematics. This study would help students to adopt appropriate study habits to enhance their performances in Mathematics.

Thirdly, parents invest huge sums of money in their wards' education so that they can be good and resourceful persons in the nearby future. The outcome of this study would help parents to understand and appreciate that students' academic performances do not depend solely on money spent on them but also study habits of the students as well. This

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would help parents to focus on study habits of their wards as well and encourage them develop positive study habits towards Mathematics.

Finally, this study would serve as a foundation for researchers who want to further research into this area in order to improve on study habits in general. It would incite special attention to on study habits and its relation to academic performance. This would help to establish bridge the gaps in study of effects of study habit on academic performance of students in Ghana.

1.7 Scope of the Study

The study was carried out in the Kumasi Metropolis, focusing on selected Junior High Schools. The study specifically focused on Weweso M/A JHS, Aprade JHS, Kentinkrono JHS and Emmanuel Methodist JHS, Anwomaso JHS.

The study contextually focused on study habits of students in Mathematics and its effects on academic performance.

1.8 Organization of the Study

For analytical purposes and easy understanding of issues raised, the study consists of five chapters. Chapter one represents the introductory part of the research. It offers information on the main theme of the study which highlights the background of the study, statement of the problem, objectives and research questions, significance of the study, scope of the study, definitions of key terms and brief methodology.

Chapter two contains a review of literature, a conceptual and theoretical framework which underpins the study. It specifically reviews literature on concept of study habit, concept of academic performance, study habits methods, theories of study habits,

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challenges of studying Mathematics and effects of study habit on academic performance in Mathematics.

Chapter Three looks at the methodology and will contain research design, study population, sampling techniques and sample size, data collection instruments, pre-test of instruments, validity and reliability of instrument and data analysis.

Chapter Four presents the results and discussions while Chapter Five contains summary of findings, conclusion, recommendations and suggestions for future research.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter seeks to review and present relevant literature on the effects of study habits on academic performance of students. The chapter is organized in three sections. The first section looks at concept of study habit which specifically focuses on definition of study habit, categories of study habit, determinant of study habit and challenges of study

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habit of mathematics at the Junior High School level. The next section looks at concept of academic performance whiles the last section focuses on the effect of study habit on academic performance in mathematics at Junior High School level. The chapter ends with summary.

2.2 Concept of Study Habit

Nagaraju (2004) defined study as application of the mind to a problem or subject, a branch of learning, an investigation of a particular subject. Studies are generally critical to success in school, considered essential for acquiring good grades, and useful for learning throughout one's life. Habit means fixed routine responses to the particular situation by human being (Nagaraju, 2004).Habit is a pattern of various activities which are done by the learner without conscious efforts. Nagaraju (2004) stated that habits are formed, learned and developed in a planned way. Habits are very important and play significant role in shaping the personality of the individual. Education inculcates proper habits in the students. Habits like thinking properly, reasoning, punctuality helps students to adjust, learn and achieve good academic performance.

Crede and Kuncel (2008) defined study habit as the routine of studying in a condusive environment. These consist of routine activities and behavioral traits such as being organized, taking and keeping good notes, reading textbooks, listening in class, doing class works, and constantly working in a focused manner (Benedicto, 2013). Study habits as perceived by Credé and Kuncel (2008) refer to external factors which facilitate the study process like regular involvement in study sessions, self-evaluation, and studying in a condusive environment. Venturina (2014; Good, 1998) also defines study habit as the

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regular tendency and practice that one depicts during the process of gaining information through learning, either within the family life settings or through the school system.

Study habit, when broken down involves the time put into study, method used in studying and content of study. A student with good study habits finds conducive time always for his private study and uses right study method depending of the subject being studied. The student also uses the right materials (textbooks or notes book which contains right information on a particular topic) for his studies (Husain, 2000).

2.3 Student's Attitudes towards Mathematics

Students' study habits of mathematics are influenced by their attitudes towards mathematics and their teachers. If the attitude is negative, students are likely to perform poorly but students perform better when attitude is positive. Students need to develop a positive attitude towards mathematics as a subject and their teachers in order to enhance the development of a strong foundation for learning of mathematics. Orton (1987) pointed out that some students are blamed for having negative attitude towards mathematics yet most of them are not motivated to change that attitude. Students would therefore have some measure of success in mathematics lessons if they are motivated to develop positive attitude towards it. Watson (1976) argued that students develop negative attitudes towards mathematics as they move from lower classes to upper classes. He notes that students' attitudes towards mathematics are usually positive in early years of primary schooling but these decreases as they progress to upper classes. This view is supported by Taiwo (1974) who suggests those students' attitudes towards mathematics decreases as they climb higher because most of them have a general belief that mathematics is a very difficult subject that

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can only be understood by bright and hardworking students. Rukangu (2000) also supports this view by pointing out that poor performance in mathematics in national examinations could be due to the unproven belief that the subject is difficult.

Bell (1980) also observed that what students learn and how they learn is very closely tied to their attitude about the school and the subjects that are taught. Giles (1961) also pointed out that the image of mathematics has been that of "adult subject" such that it becomes very easy for a child to be discouraged right from the start. This implies that if a student misses the first essential steps, he will have great difficulties in catching up, even if this interest is awakened at a later stage. This clearly demonstrates that student's feelings and perception about mathematics is a major factor affecting his or her performance in the subject. Once students are motivated, they develop positive attitudes towards both the subject and the teachers and this will lead to the understanding of what they are taught from the lower levels to secondary school.

Donavan (1967) stated that it is the attitudes developed by the students which are likely to stimulate or stop further study of mathematics. This shows that it is the attitudes that students develop that are highly involved in the learning and retention of mathematical concepts.

The attitudes of students toward mathematics translate into their study habits of the subject. Generally, study habits can be classified into two categories and they are good study habits, and bad study habits (Katelyn, 2013; Atsiaya siahi & Maiyo, 2015; and Ebele & Olofu, 2017).

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2.3.1 Good Study Habits

Katelyn (2013) refers to good study habits as positive or productive study habits. Good study habits are the positive and productive behaviors, attitudes, and habits which when applied to study processes have the tendency to improve the academic performance of students or that seem to produce good results (Katelyn, 2013). Good study habits occur as a result of constant practice (Atsiaya & Maiyo, 2015).

Katelyn (2013) identifies the following fourteen positive and productive study habits which students can employ to their learning processes to improve their academic performance:

1. Attending all classes
2. Reviewing your notes daily
3. Reading material prior to it being covered in class
4. Study daily
5. Have at least one conference with the professor (teacher)
6. Develop and learn a word list for the course
7. Read materials to improve your background in the course (other than text)
8. Attend help session
9. Attend learning resource lab when available
10. Develop a list of possible questions
11. Ask questions in class
12. Study an old exam (when available)
13. Avoid a last minute cram session, and

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14. Sleep at least 8 hours the night before exams commence (Katelyn, 2013).

Harper and Row (2009) highlight the following as good study habits:

1. Studying every day
2. Creating a quiet place at home or anywhere to study
3. Turning off the phone, TV and other devices that may disturb you when studying
4. Listening to soft music or white noise
5. Studying in a way that suits your learning style
6. Taking regular breaks
7. Studying early (do not wait for last minutes)
8. Studying the hardest things first, spending more time on topics you find difficult
9. Asking for help if one is struggling with his studies, taking notes as one studies as well as organizing notes in a notebook or folder (Harper and Row, 2009).

2.3.2 Bad Study Habits

Bad study habits according to John (2010) are the negative or the non-productive study habits which are undesirable and counter-productive to students' academic performance. Bad study habits have the tendency to disrupt, hinder, and hamper academic progress and performance of students (John, 2010).

Nikki (2013) however observes that what appears to be a bad habit for one person may tend to be good to another, based on individual differences .Individuals are endowed with peculiarities and uniqueness which differs from one person to another and so what

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may be considered as bad study habits to a student may seem to be very productive and efficient for another student (Nikki, 2013). He however, listed the following as generally being bad study habits: procrastination, truancy, not taking note, selective reading, studying while watching television (what is generally regarded as distractive study), studying with friends who have already develop bad study habits, listening to loud music, studying in uncomfortable conditions and ramming (Nikki, 2013).

2.4 Determinants of study habits

Study habits generally can be affected either positively or negatively by hosts of factors. Under this section, the study seeks to identify from the literature the most pertinent ones.

2.4.1 Environment of the Study

Environment of the study includes physical conditions during study time. The place of the study should be clean, calm and free from distractions. The room should be properly ventilated and must have sufficient light. The furniture in the room should be as per the requirement and supporting to the seating arrangements to maintain correct and comfortable posture. Study table should be clean and contain only and all the necessary things. The study area should be fixed and one should study at the same time daily to create the association with the surroundings which helps to concentrate on the study. The stress free, happy and peaceful home environment is essential to focus on the study.

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Demir, Kilinc and Dogan, (2012), Benedicto (2013), and Puma-at and Hamed, (2016) underscore the importance of the study environment in forming study habits. According to them, the environment can help students to get organized and to take advantage of specific study methods such as efficient reading, listening to lectures, note-taking, efficient writing and doing homework. Good and quite atmosphere without internal or external distractions can help students to have full concentration (Puma-at & Hamed, 2016). This suggest that how the school system is organized regarding structural layouts, architectural designs allowing adequate ventilation, lighting system, seating arrangements, curriculum design and time management as well as access to adequate teaching and learning materials may have impact on the study habit. Good environment within this context can thus lead to positive study habits and poor environment can have adverse consequences.

2.4.2 Time Management

Kim (2013) posted that the total amount of time that students use for studies can have effects on their study habit. He emphasized that total study time is a predictor of academic success and that students perform better if they spend more time in studying and poor if they spent less time in studying (Kim, 2013; Harb & El-Shaarawi, 2006). Therefore, time management affects student's study habit. Time management is the act or process of planning and exercising conscious control over the amount of time spent on specific activities, especially to increase effectiveness, efficiency or productivity.

If a student is able to manage his time properly he can get success in studies as well as in the extra-curricular activities. It is very important to plan the time of the study. Time

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schedule helps to adjust the study periods and other activities according to the needs of the individual. It helps the learner to carry out their day-to-day activities effectively which results in achieving their goals easily.

2.4.3 Reading Ability of Student

Harb and El-Shaarawi, (2006) noted that ability to read and comprehend the medium of instruction affects study habits because if students have strong communication skills and have strong grip on the language of instruction, their academic performance is increased since they can employ different ways of learning (Harb & El-Shaarawi, 2006). Thus, not only the total time devoted to studies but also the ability to read and understand the English Language as a medium of instruction can affect study habits.

If people give up reading habit obviously they become lopsided and cease to grow (Nagaraju, 2004). General, understanding of a text can be achieved through reading. It gives confidence and enjoyment to the student. Reading skills enable readers to turn writing into meaning and achieve the goals of independence, comprehension, and fluency (Nagaraju, 2004).

Speed of reading is an important factor. Silent reading is faster than loud reading. It is essential to adjust the reading speed as per the importance of the matter. A student must read carefully to understand the concepts and ideas. Those concepts and ideas should be remembered and summarized systematically by the student. Thomas and Robinson (1972) developed the strategy for effective reading and learning. In this technique, the learners are taught a systematic approach to learn the desired material in a sequential manner by following certain steps. The technique is known as SQ4R technique, which includes Survey, Question, Read, Reflect, Recite and Review.

i. **Survey** – The matter is surveyed by reading only titles, headlines, noticing graph, maps, figures, summary etc.

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ii. **Question** – In this step student has to ask various questions to himself like why, what, when, how, where, who depending on the content/matter surveyed.

iii. **Read** – The matter is then read to understand the concept by keeping all the questions in mind.

iv. **Reflect** – In this step the matter has to be made meaningful by linking it with previous knowledge, comparing and correlating the facts.

v. **Recite and Recall** – The information provided in the material has to be remembered through recitation and recall, may be orally or in writing.

vi. **Review** – In this step the matter has to be reviewed, after finishing the whole chapter, the student asks the questions to himself. In case he is unable to answer them, he has to read the material again and evaluate his learning performance.

2.4.4 Preparation of Notes

Note taking is the practice of recording information captured from another source. By taking notes, the writer records the essence of the information, freeing their mind from having to recall everything. Note taking is a form of self-discipline and self-recitation (Mangal, 2010).Proper note taking is itself a part of study skills, and has to be improved and developed. During preparation of the notes, one has to read the matter again and again, understand it and then note it down by using any form of note taking like;

i. **Sequential or linear note making -** It is a traditional approach of making notes in the form of lists or phrases. Main points are written in sequence. It may include copying the paragraph from the book or only main ideas/concepts or points.

ii. **Pattern note making or mind mapping –** This technique is more visual than linear approach. In this, various patterns are used to prepare the notes like arrows,

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circles, lines, flow charts etc. In 1979, Tony Buzan advocated the concept of mind mapping which involves making notes with patterns and by using images.

Belardi (2013) has identified key features of a good note taking which students should adhere to as follows;

i. Note should be concise, brief and accurate.
ii. Abbreviations should be used to aid note making
iii. Use of diagrams will not only make the notes much easier to read and more presentable but also help to memorize the subject material
iv. Important points, ideas or concepts should be underlined or highlighted
v. Page should be divided into meaningful portions to note heading, main points, formulas, figures, summary etc.
vi. Reliable and recommended proper resources should be used to prepare the notes.
vii. Symbols, images, colours can be used to make it catchy

2.4.5 Technology

Kahari, (2013), Poscia et al., (2015) and Belardi (2013) have identified technology as one of the factors that can contribute to study habit formation. Investigating the effects of technology on students' performance, Borzekowski & Robinson (2005) posit that availability of home computers for the student to use was positively associated with scores and better performance. But less time in reading and doing assignment is associated with greater television access and use. However, Pool et al. (2003); Gemmill & Peterson, (2006); and Poscia et al (2015) observed that TV educational programmes can influence students study habits. Pool et al. (2003) specifically observed that students who do their homework whiles watching TV significantly performed more poorly and slowly than those

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students who do their homework with music and radio. Thus, with technological advancement, students should be guided on the use of technology like TV when learning or doing assignment.

2.4.6 Learning Materials

Researchers have emphasized on the importance of adequacy of learning materials on study habits. Kim, (2008) and Boado (2012) observed that the study habits of students are affected by the availability and use of resources such as library resources, access to internet, journals, magazines, video tapes, maps, books, encyclopedias, globes, drawing sets, etc. (Kim, 2013). Moreover, mobile devices could influence study habits and improve their access to education materials (Kahari, 2013). Mobile device can enhance their literacy and numeracy skills (Neal & Hooft, 2006), aid independent and collaborative learning experience (Attewell, 2005; Cavallo, et al. (2010), and promote prolonged and individualized study habits (Poscia et al, 2015; Brown, 2005).

2.5 Conceptual Framework

The conceptual framework developed for this study is shown in Figure 2.1.

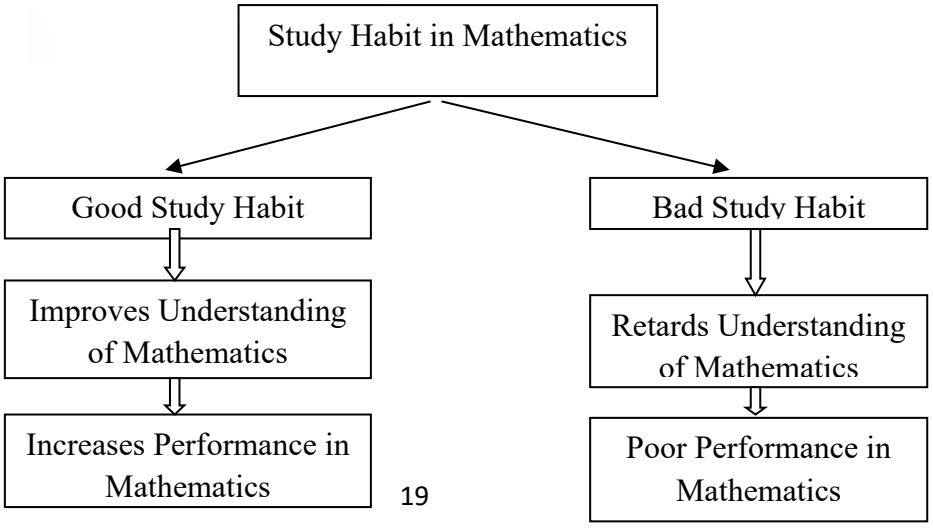

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Figure 2.1: Conceptual Framework for Effects of Study Habits on Academic Performance in Mathematics
Source: Author's Own Construct (2018)

Figure 2.1 shows that study habit of students for mathematics can either be good or bad. A good study habit for mathematics where students adopt appropriate methods of learning mathematics and these include, working examples in a jotter or solution board, using appropriate mathematics text book and solving past questions on topics studies. A good study habit enhances understanding of mathematics, thereby leading increase in academic performance in mathematics.

However, poor study habits is whereby study learns mathematics with wrong methods and in uncondusive environment. For example, student learning mathematics without working examples but just reading like learning English Language, learning mathematics whiles laying on a bed. Bad study habits retard understanding of mathematics, thereby leading poor academic performance of students in mathematics.

2.6 Concept of Academic Performance

Performance generally has been defined by Taneja (2003) as how well or badly something is done, and within the context of education, performance is a result of study habits which is formed and strengthened by education and manifests itself through academic achievement (Atsiaya siahi & Maiyo, 2015; and Taneja, 2003). Cary, Roseth, David and Roger (2008) defined performance as the ability of students to comprehend and accurately answer tests and accurately solving problems. Kobaland and Musek (2001) defined academic performance from two perspectives. First is the objective definition

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which uses numerical scores of a student's knowledge, which measure the degree of a student's adaptation to school work and to the educational system. Second is the subjective definition which looks at the students' attitudes towards his academic achievement.

Academic performance is based on test (Simpson & Weiner, 1989). Academic performance is commonly measured by examinations or continuous assessment (Ward, Stoker & Murray-Ward, 1996). Bruce and Neville (1979) noted that academic performance is measured by standardized test developed for school subjects. What this means is that academic performance is measured in relation to what is attained at the end examination.

Outcome, performance and achievement are used interchangeably (Richard & Tony, 2000). However, Mark and Ainley (1999) used them differently. According to Mark and Ainley (1999) academic performance is one-point observation. Lawrence (1998) distinguished achievement from performance when he stated that academic achievement is a long-term (end) while academic performance is measurable at any point in time (continual). Academic performance is how students deal with their studies and how they cope with or accomplish different tasks given to them by their teachers in a fixed time or academic year (Dimbisso, 2009).

Academic performance can be low, average and high. Diaz (2003) considers low academic performance or academic failure as the situation in which the student does not attain the expected grade according to his or her abilities, resulting in an altered personality which affects all other aspects of life. Aremu (2000) define poor academic performance as performance that is blow expected standard. The interpretation of this expected or desired standard is better appreciated from the perpetual cognitive ability of the evaluator of the

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performance. The evaluator or assessor can therefore give different interpretations depending on some factors.

2.7 Effects of Study Habits on Performance in Mathematics

Different researchers have variously identified effects of study habits on academic performance, either good or bad (Puma-at & Hamed, 2016; Yadav, Ansari & Savant, 1999; Rana & Kausar, 2011; Hassanbeigi, 2011; and Palani, 2012). According to Puma-at & Hamed (2016) bad study habits may be the cause of poor performance, failures and drop outs from schools (Puma-at & Hamed, 2016). Yadav, Ansari & Savant (1999) opined that good study habits play substantial role on student achievement given the fact that students can take advantage of their time in their study processes to improve their academic performance. Good study habits improve the academic achievement of students through effective notes taking, and effective time management (Rana & Kausar, 2011). It helps in any career the students may have beyond university (Hassanbeigi, 2011). Good Study habits help shape the personality of individuals and to develop proper thinking abilities, and to create new ideas leading to higher academic achievements (Palani, 2012). Good study habits help students to be confident, relaxed and less stressful during examinations and bad study habits make students anxious and jittery during examinations (Marc, 2011). Ashish (2013) opined that students must shun bad study habits if they want to achieve academic success throughout the entire year of schooling. Adeninyi (2011) suggests that good study habits enable students to study independently at home and aspire for higher educational career. In the view of Agba (2013), good study habits help students to be regular and punctual to class as it also helps them to do their class and home works. Monday (2008) thinks that good study habits in school help students succeed in class and achieve

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educational goals. Also, effective study habits help students to achieve good results and enable students to reap the benefits from their efforts (Sadia, 2005; Tschumper, 2006; Mark & Howard, 2009; Grace, 2013; Akpan & Salome, 2015).

A thorough search into the literature finds growing number of research which establishes direct relationships between good study habits and academic performance (Tope, 2011, Monica, 2015; Mashayekhi, et al., 2014; Akpan & Salome, 2015; Ebele & Olofu, 2017; , Ebele & Olofu, 2017). For example, Tope (2011) investigated the effects of study habits on the academic performance of students' using some selected senior secondary schools in Ijebu-Ode Local Government Area of Ogun State, Nigeria and found out that there is positive relationship between good study habits and academic performance. Specifically, the study reports that peer group pressure, personality type of the student, and the school environment all affect the reading habit of students in secondary school and hence, their academic performance (Tope, 2011). Monica, (2015) examined the influence of study habits on academic achievement of students in Home Economics in Junior Secondary Schools in Enugu State, Nigeria and found that there is a positive correlation between good study habits and academic performance of Home Economics students. Particularly, the study revealed that scores of study habits that prevail among Home Economics student are poor, average and good study habits. The result showed that good study habits and academic achievement has a significant positive relationship (Monica, 2015). Also, (Mashayekhi, et al., 2014) investigated the relationship between study habits and academic achievement of undergraduate students of Islamic Azad University Jiroft Branch. The results showed that 89% of students have relatively desirable study habits and that there is a high positive correlation between study habits and academic achievement

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Mashayekhi, et al., 2014). Moreover, Ebele & Olofu (2017) investigated the impact of study habits on the academic performance of students of secondary schools in the Federal Capital Territory, Abuja, Nigeria. The findings of the study revealed that there is significant relationship between study habits and students' academic performance and recommended that schools should activate the processes of guidance and counseling to guide students to have good study habits.

Atsiaya siahi and Maiyo (2015) sought to determine the relationship between study habits and academic achievement of students. Results of this study revealed a positive relationship of 0.66 between study habits and academic achievement. The results implied that the study habits need a significant attention if we are to improve performance (Atsiaya siahi & Maiyo, 2015). Likewise, Akpan and Salome (2015) investigated the effect of study habit on academic achievement of agricultural science students in senior secondary schools in Emohua Local Government Area of Rivers State, Nigeria. The result showed positive correlation between good study habit and academic performance of student. The study established that students frequently study at home, prepare their assignments, prioritize their college works, study before the examination day, spend more time in studying, and do advance readings. They frequently have a clean, quiet and comfortable place of study, their supplies are within reach, and they prefer to study alone. Furthermore, they frequently attend review classes, use the internet, and go to the library for studying, reading and borrowing books and other resources. They also frequently watch videotapes, movies and other videos to get information related to their subjects (Pumaa-at & Hamed, 2016).

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2.8 Summary and Conclusion

This chapter sought to review and present relevant literature relating to the effect of study habits on academic performance. Academic performance has been generally has been defined as how well or badly something is done (Taneja, 2003), has been identified to refer to how well a student performs in subject contents which are classified as core or elective subjects (Ebele and Olofu,2017). Study habits among other things consists of routine activities and behavioral traits such as being organized, taking and keeping good notes, reading textbooks, listening in class, doing class and works, and constantly working in a focused manner, which can have positive of negative results on students' academic processes and outcomes (Benedicto, 2013).

Study habit can be good or bad. Good study habits are the positive and productive behaviors, attitudes, and habits which when applied to study processes have the tendency to improve the academic performance of students or that seem to produce good results (Katelyn, 2013). Bad study habits on the other hand are the negative or the non-productive study habits which are undesirable and counter-productive to students' academic performance and which have the tendency to disrupt, hinder, and hamper academic progress and performance of students (John, 2010). Number of factors influence study habit in mathematics and these include study environment, time allocation, curriculum design, student's ability to read and comprehend and technology.

Throughout the review of the literature it is evident that good study habits have positive and significant correlation with students' academic performance whilst bad study habits have negative but significant correlation with academic performance. It thus,

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requires concerted efforts of teachers and counselors to work hand in hand to assist students to develop good study habits in mathematics and avoid bad study habits in the subject.

CHAPTER THREE

METHODOLOGY

3.1 Introduction

This chapter looks at research methodology employed to conduct this study. The methodology entails research approach and design, area of the study, population, sample and sampling techniques, research instruments, reliability and validity of research instruments, data collection procedure, data analysis procedure and ethical consideration.

3.2 Research Design

This study employed descriptive survey using quantitative approach for the study. Descriptive survey design was used because it uses elements of quantitative research approach. It also deals with the "what is", which uses observational and survey method in data collection (Borg & Gall, 1989). With the descriptive survey design, this study can answer the questions, "What is the influence of study habit on academic performance in mathematics in selected Junior High School in the metropolis?" Therefore, descriptive design is most appropriate for this study.

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Quantitative research approach is whereby a researcher uses positivist claims to develop knowledge and collect data on predetermined instrument that yield statistical data (Creswell, 2003). With the quantitative research approach, this study can employ mathematical tools such as mean and standard deviations, frequency and percentages to analyze the influence of study habits on academic performance of students. This approach is used rather than qualitative approach because it helped to better establish the influence of one variable on the other (Twumasi, 2001).

3.3 Area of the study

Though there are a number of schools at all levels of education in the Kumasi Metropolis, this study focused on Junior High Schools in Weweso Circuit. This is because not much attention has been given to study habits of Junior High School students, especially in Mathematics. The metropolis has junior high schools such as Anwomaso JHS, Emmanuel Methodist JHS,Yaa Asantewaa M/A Primary, Yaa Achiaa M/A Primary, T.I Ahmadiyya "D" Primary, T.I Ahmadiyya "A" Primary, Kwame Nkurmah University of Science & Technology Junior High School, Weweso M/A Junior High School, MA Bediako Adventist Preparatory School, D&D Academy, Nana Serwaa Standard School, and St. Louis Jubilee School, Kentinkrono JHS.

The unique centrality of Kumasi as a traversing point from all parts of the country also makes it a special place for many people to migrate to for educational purpose. This may explain why the metropolis has a number of public and private schools at all educational levels.

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3.4 Population

Population in research is group of people having common characteristics that are of interest to a study (Sidhu, 2003). The target populations for the study were students and teachers of Mathematics in junior high schools in Weweso Circuit in the Kumasi Metropolis. The targeted schools are Weweso M/A Junior High School, Aprade D/A Junior High School, Kentinkrono Junior High School, Emmanuel Methodist Junior High School and Anwomaso D/A Junior High School. The population of students and teachers in each selected school is shown in Table 3.1.

Table 3.1: Population of Students and Teachers in the Selected Schools

Selected Schools	Population of Students	Population of Teachers
Weweso M/A Junior High School	162	8
Aprade JHS	171	11
Kentinkrono JHS	178	12
Emmanuel Methodist JHS	159	9
Anwomaso D/A JHS	241	15
Total	911	55

Source: Administrations of the Selected Schools (July, 2018)

3.5 Sampling Techniques

Samplings techniques are grouped into probability or non-probability sampling techniques. In this study, a probability sampling known as simple random sampling was employed. This study used random sampling because it helped to eliminate sampling bias. Every junior high school in the circuit had equal chance of being selected to be part of the study. The study selected five junior high schools in the Weweso Circuit using the simple random sampling method specifically the lottery method where the researcher wrote the

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names of all the eight public junior high schools in Weweso Circuit in the Kumasi Metropolitan Education Service on pieces of papers. The researcher put them in a container and shook it and picked the first school without replacement. The process was repeated until all the five junior schools were picked. The schools selected were Weweso M/A Junior High School, Aprade D/A Junior High School, Kentinkrono Junior High School, Emmanuel Methodist Junior High School and Anwomaso D/A Junior High School. Within each school, the researcher continued to use simple random sampling-via lottery to select respondents (students). Each school selected has at most two mathematics teachers; hence in the case of mathematics teachers, all were used for the study. The study used all the teachers in each selected school because they were few, cost of collecting data from them was very low and all teachers were present at the time of data collection.

3.6 Sample Size

Krejcie and Morgan (1970) sample size determination presented in Table 3.2 was used to determine the sample size of 278 from a sampling frame of 911. The sample frame is made up of students from Weweso M/A Junior High School, Aprade D/A Junior High School, Kentinkrono Junior High School, Emmanuel Methodist Junior High School and Anwomaso D/A Junior High School. The sample size is based on the sample size determination of less than or equal to 10,000 using 95 percent confidence interval.

Table 3.2: Student Participants Selected From the Schools

Selected Schools	Population of Students	Relative Frequency (rf)[%]	rf*278
Weweso M/A Junior High School	162	0.18	50

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Aprade JHS	171	0.19	53
KentinkronoJHS	178	0.20	56
Emmanuel Methodist JHS	159	0.17	47
Anwomaso D/A JHS	241	0.26	72
Total	911	1.00	278

Source: Author's Own Construct (2018)

In the case of teachers, each selected school had two mathematics teachers; hence sample size for teachers in each school was two. This meant that all mathematics teachers in each selected school were used in the school. In all two hundred and seventy-eight (278) students and ten (10) teachers were used for the study.

3.7 Research Instrument

There are several research instruments but this study employed the questionnaire. This is because questionnaire helps to gather data quickly at a cheaper administration cost (Bryman, 2004). With the questionnaire, researcher does not necessarily need to be present for respondents to provide their responses; hence reducing the administration cost. Questionnaire provides predetermined responses to questions from which respondents choose responses; ensuring standardization of responses and quick administration and responses questions (Parfitt, 1997).

In view of the advantages of questionnaire administration, this study used it to gather data from students and teachers who were the respondents in this study. Two different sets of questionnaire were designed. The first set was designed for students and second set for teachers of mathematics. The questionnaire for students was divided into four sections as follows. Part A focused on personal data such as information of the sex of

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the respondents. Part B focused on study habits exhibit by students when learning Mathematics. Part C looked at the challenges students face when studying mathematics. Part D focused on influence of study habits on academic performance of students.

Qquestionnaire for teachers was divided into three sections as follows. Part A looked at the personal data such as sex, age, educational attainment and number of years taught as mathematics teacher in the school. Part B focused on challenges teachers face when teaching mathematics. Part C looked at the influence of study habits on academic performance of students. All the questions contained in questionnaire for students and teachers are closed-ended.

3.8 Pilot Study

A pilot study was conducted at Fawoade M/A Primary School in the Kwabre East District in the Ashanti Region with thirty (30) students and two (2) teachers before the actual data collection was done. This was done to ascertain the validity and the reliability of the instrument. According to Orodho (2008), validity is concerned with establishing whether the instrument is measuring what it is supposed to measure. Also, Hollinger et al. (2013) defined reliability as the measure of the degree to which a research instrument yields consistent results or data after repeated trials.

The responses after the pilot study helped to modify some of the questions to suit the research objectives. The Cronbach's Alpha (α) test was used to check the internal consistency of the items in the questionnaire and yielded a reliability score of 0.816 (ie $\alpha > 0.7$) which is regarded as a good measure of reliability in research (Field, 2013).

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3.9 Data Collection Procedure

The researcher obtained an introductory letter from Department of Educational Leadership, University of Education to seek permission from head teachers of the selected schools for administration of the questionnaires. Two Field Assistants were employed to help in the questionnaire administration. The field assistants were trained to understand the purpose of the study, actual meaning of the questions and how to handle the questionnaires. To avoid waste of time and energy, the respondents were encouraged to fill in the questionnaires in the presence of the field assistants. The purpose of this was to ensure high response rate. The administration of the questionnaires was done in each school during break time (both the first and second breaks).

This study in accordance with questionnaire administration guidelines provided by Gray (2009), informed the respondents the purpose of the study, the extent of their engagement in the study and assured them of strict confidentiality. This encouraged the respondents to willingly express their candid views on the subject matter for reliable data and outcome of the study.

3.10 Data Analysis Procedure

The data is analyzed descriptively. The data collected through questionnaire administration were cleansed and entered into Statistical Package for Social Science (SPSS) version 21.0. Frequencies and percentages were used to analyze the personal information of the respondents, study habits of students, challenges of both students and teachers face learning and teaching mathematics respectively and influence of study habits on academic performance in mathematics.

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3.11 Ethical Consideration

Permission for the administration of questionnaires in the selected schools was obtained from the Head Teachers. The study moreover, sough the consent of the target groups in each school. The students and teachers were informed the purpose of the study, the nature of their participation and the kind of information needed from them and the required time for their participation. The respondents were assured of strict privacy and confidentiality.

Questionnaires were neatly and confidentially handled by the researcher or Research Assistants before, during and after data collection. Plagiarism and paraphragiarism have attracted attention of scholars in the recent times. Plagiarism involves taking undeserved credit for something that another professional has written (Gall et al., 2007) and damages both the author and his or her profession. Paraphragiarism involves close coping of another writer's words, one-to-one correspondence in the expression of ideas, and structural similarities in writing (Gall et al, 2007). In this study, all sources of materials used were acknowledged and also all the actual words, ideas or structure used by the researcher were duly acknowledged.

3.12 Summary of the Chapter

The chapter looked at the methods that were used for data collection and data analysis. The study focused on students and teachers in the Weweso M/A Junior High School, Aprade D/A Junior High School, Kentinkrono Junior High School, Emmanuel Methodist Junior High School and Anwomaso D/A Junior High School. The study used questionnaire to collect relevant data from both students and teachers. The research

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employed quantitative research approach and this was suitable for analyzing structured questionnaire for both students and teachers.

CHAPTER FOUR

PRESENTATION OF RESULTS

4.1 Introduction

In this chapter, the results of the study are presented and discussed. The presentation and discussion of data were done in accordance with the arrangement of objectives of the study. Data were collected from both teachers and students of selected Junior High Schools in Kumasi Metropolis in accordance with the methodology presented in Chapter Three. Issues discussed in this chapter include the demographic characteristic of respondents, study habits of students towards Mathematics, challenges students face in the study of Mathematics as a subject and the effects of study habits on students' academic performance in the Mathematics.

4.2 Characteristics of Respondents

The characteristics of respondents in this study are grouped into two, characteristics of students sampled and the characteristics of the teachers sampled for the study.

4.2.1 Characteristics of Respondents (Students)

The characteristic of respondents (students) considered in this study is sex as shown in Figure 4.1.

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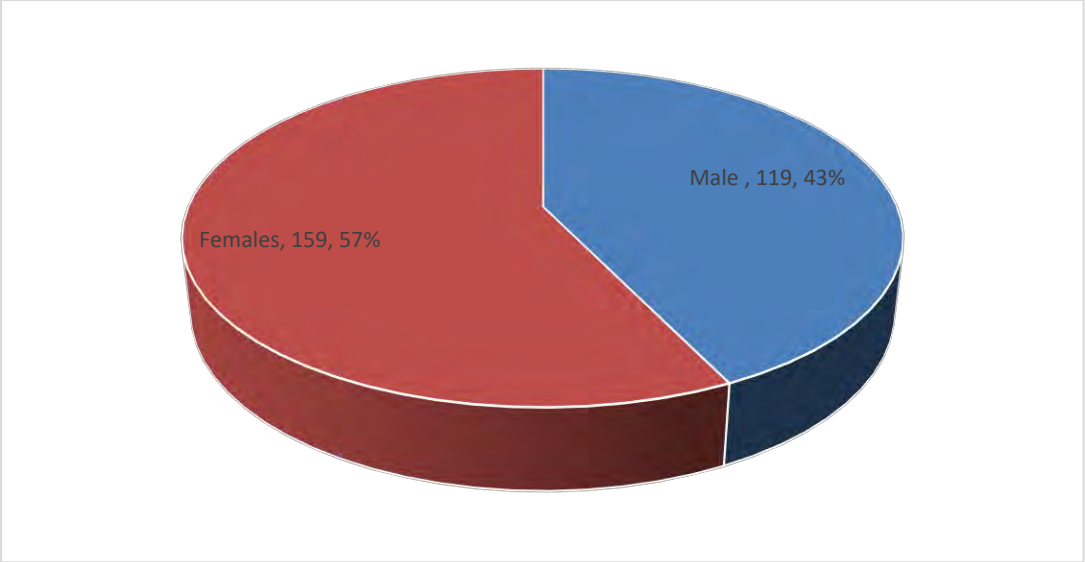

Figure 4.1 Sex distribution of Students

Source: Field Data (2018)

From Figure 4.1, majority of the respondents 159(57.2%) were females and the remaining 119(42.8%) were males.

4.2.2 Socio-demographic Characteristics of Respondents (Teachers)

The socio-demographic characteristics of respondents (teachers) considered in this study were sex, age and educational level.

4.2.2.1 Sex

The sex distribution of respondents (teachers) is shown in Table 4.2.

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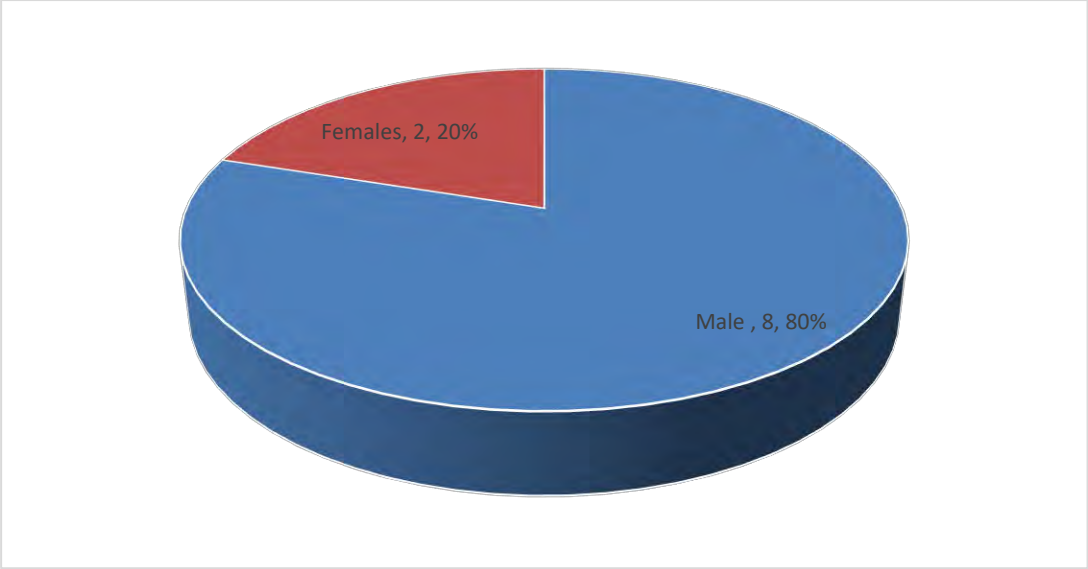

Figure 4.2: Sex Distribution of Teachers

Source: Field Data (2018)

From Figure 4.2, majority of the respondents 8(80.0%) were males and the remaining 2(20.0%) were females.

4.2.2.2 Age of Respondents

The range of ages of teachers in relation to their sexes is presented in Table 4.1.

Table 4.1: Cross Tabulation of Age and Sex Distribution of Teachers

AGE (yrs.)	SEX					
	Male		Female		Total	
	F	%	F	%	F	%
20-30	2	25.0	0	0.0	2	20.0
31-40	6	75.0	2	100.0	8	80.0
Total	8	100.0	2	100.0	10	100.0

Source: Field Data (2018)

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From Table 4.1, majority of respondents (80.0%) fell between 30 years and 40 years. Within the same age group, the number of male teachers outnumbered that of female Mathematics Teachers.

4.2.2.3 Educational Qualification

Formal education is very important in teaching Mathematics in Junior High Schools. The education level of the respondents is shown in Table 4.2.

Table 4.2: Cross Tabulation of Educational Level and Sex Distribution of Teachers

Educational Level	SEX					
	Male		Female		Total	
	F	%	F	%	F	%
Diploma	6	75.0	0	0.0	6	60.0
First Degree	2	25.0	2	100.0	4	40.0
Total	8	100.0	2	20.0	10	100.0

Source: Field Data (2018)

Majority of the respondents (60.0%) in Junior High Schools had diploma certificate and 40.0% had first degree certificate. Table 4.2 further shows that both males and females have the same number of first degree certificate in the teaching of Mathematics.

4.3 Study Habits of Students towards Mathematics

In order to determine study habits of students towards Mathematics in Junior High Schools in the Kumasi Metropolis, the study asked the respondents (students) to indicate

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extent of agreement or disagreement to statements related to study habits of Mathematics (See Table 4.3).

Table 4.3 Study habit of students

Statements	Strongly Disagree	Disagree	Neutral	Agreed	Strongly Agreed
Attend all mathematics classes	0 (0.0%)	27 (9.7%)	9 (3.2%)	122 (43.9%)	120 (43.2%)
Revise mathematics notes daily	20 (7.2%)	61 (21.9%)	109 (39.2%)	76 (27.3%)	12 (4.3%)
Ask for help on contact topics/ sub-topics that are difficult	54 (19.4%)	56 (20.1%)	53 (19.1%)	93 (33.5%)	22 (7.9%)
Ask questions in class	30 (10.8%)	43 (15.5%)	69 (24.8%)	81 (29.1%)	55 (19.8%)
Solve past questions	56 (20.1%)	16 (5.8%)	34 (12.2%)	110 (39.6%)	62 (22.3%)
Study in quite environment	49 (17.6%)	62 (22.3%)	25 (9.0%)	93 (33.5%)	49 (17.6%)
Have a study group for mathematics	100 (36.0%)	91 (32.7%)	30 (10.8%)	31 (11.2%)	26 (9.4%)
Do all mathematics without copying from others	36 (12.9%)	22 (7.9%)	64 (23.0%)	82 (29.5%)	74 (26.6%)
Have a personal mathematics textbook	40 (14.4%)	41 (14.7%)	12 (4.3%)	58 (20.9%)	127 (45.7%)

Sources: Field Data (2018)

From the Table 4.3, majority of the students 87.1% attested that they always attend mathematics classes whilst the remaining 12.9% expressed otherwise. However, the results in Table 4.3 shows that 51.1% of the respondents noted disagreement and 48.9% of the

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respondents expressed agreement that they asked questions in class. Table 4.3 shows that majority of the students (68.6%) expressed disagreement to the statement that they revise Mathematics notes daily whilst 31.7% expressed agreement to the statement. Majority of the students (66.6%) had personal time tables whiles the remaining 33.6% had no time table as a guide to revision at homes.

From Table 4.3, 58.6% of the students noted disagreement and 41.4% expressed agreement that they asked for help on topics/ sub-topics that were difficult. This shows that students in the metropolis do not contact their teachers or colleagues after school for them to be helped to understand Mathematics topics or subtopics studies in school. This also shows that most of the students were not having group studies. The results showed that 79.5% of the students were not engaged in group studies whilst 20.5% of them had study groups.

The results in Table 4.3 show that 51.1% of the students expressed agreement whilst (48.9%) noted otherwise that, they study in quite environment.

The results in Table 4.3 show that 56.2% of the students expressed agreement whilst 43.8% noted otherwise that, they do all Mathematics assignments without coping from others. Thus they have developed a habit to do Mathematics assignments by themselves. This suggests that the students try to do independence work in the assignments and class exercises.

The study grouped the study habits into two as those with good study habits and those with bad study habit as shown in Figure 4.3.

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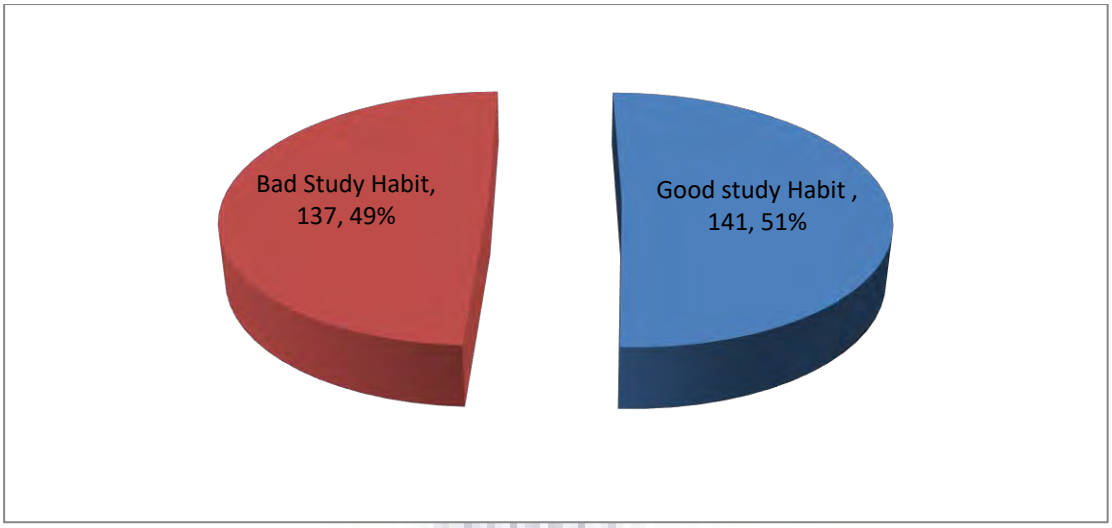

Figure 4.3: Proportion of Students with Good and Bad Study Habits

Source: Field Data (2018)

The results in Figure 4.3 show students with good study habit towards Mathematics are 2.8% higher than those with bad habit. This clearly suggests that the number of students with good study habit is almost the same as those with bad study habit towards Mathematics.

4.4 The Challenges Students Face in the Study of Mathematics

The study asked the respondents (students) to indicate extend of agreement or disagreement on some selected challenges students mostly face in the study of Mathematics in Junior High Schools. The responses are given in Table 4.4.

Table 4.4: Challenges students face in the study of mathematics

Statements	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
Mathematics textbook as guide for home studies	57 (20.5%)	58 (20.9%)	30 (10.8%)	63 (22.7%)	70 (25.2%)
Television at home	45	43	16	61	113

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	(16.2%)	(15.5%)	(5.8%)	(21.9%)	(40.6%)
Mathematics notes given by the teacher	36 (12.9%)	22 (7.9%)	35 (12.6%)	83 (29.9%)	102 (36.7%)
Understanding of symbols used in mathematics textbook	59 (21.2%)	54 (19.4%)	75 (27.0%)	44 (15.8%)	46 (16.5%)
Understanding of word used by the teacher	46 (16.5%)	35 (12.6%)	55 (19.8%)	57 (20.5%)	85 (30.6%)
House chores	84 (30.2%)	30 (10.8%)	44 (15.8%)	57 (20.5%)	63 (22.7%)
Assistance to parents/ guardian in economic activity	113 (40.6%)	55 (19.8%)	26 (9.4%)	40 (14.4%)	44 (15.8%)
Study place at home	34 (12.2%)	59 (21.2%)	21(7.6%)	73 (26.3%)	91 (32.7%)

Source: Field Data (2018)

The results in Table 4.4 shows that 52.2% of the respondents expressed disagreement whilst 47.8% noted otherwise that Mathematics textbook as guide for home studies serve as a challenge to the study of Mathematics.

From Table 4.4, the results show that majority (62.5%) of the students expressed agreement that television at home is a challenge to the study of Mathematics. However, 37.5% expressed disagreement to the statement.

Results in Table 4.4 show that majority (66.6%) of the respondents expressed agreement and the remaining 33.4% expressed otherwise that Mathematics notes given to them by their class teachers were not adequate. The inadequacy of the notes stems form few examples solved in classroom and the use of more unexplained symbols. Most (67.6%) of the respondents in the selected schools were not comfortable and familiar with most of the symbols used in teaching Mathematics. Only 32.4% were somewhat familiar with most of the symbols.

Results in Table 4.4 shows that 56.8% of the respondents indicated disagreement that house chores are challenge to the study of Mathematics whilst the remaining 43.2%

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expressed otherwise. This shows that household chores are not problems for students in the learning of Mathematics. Aside the household chores, most respondents (69.8%) expressed disagreement and the remaining 30.2% indicated agreement that assistance to parents/ guardian in economic activity is a challenge to the study of Mathematics. These two results show that majority of respondents were not actively engaged in economic activities or engaged in heavy household chore after school. This suggests that there is less competition for time for studies after school. All what is required of the respondents is effective time management

Aside the above challenges, the study asked the Mathematics Teachers to indicate the extent of agreement or disagreement to some selected common challenges to the teaching of Mathematics. The responses are summarized in Table 4.5.

Table 4.5: Challenges teachers face in teaching mathematics

Challenges	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
Mathematics textbook as a guide	0(0.0%)	0(0.0%)	4(40.0%)	6(60.0%)	0(0.0%)
Larger class size	0(0.0%)	0(0.0%)	4(40.0%)	4(40.0%)	2(20.0%)
Small time allocation for mathematics on the school time table	0(0.0%)	2(20.0%)	0(0.0%)	6(60.0%)	2(20.0%)

Source: Field Data (2018)

The respondents (teachers) tested that available of Mathematics textbook, large class size, time allocation for teaching of Mathematics were challenges.

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4.5 The Effects of Study Habits on Students' Academic Performance

This section relates to the effects of study habits on student's academic performance. The analysis is done from two perceptive, namely perspective of students and perceptive of teachers. The responses from students are given in Table 4.6.

Table 4.6 Effects of study habits on students' academic performance

Statements	Bad Study Habit (N=137)		Good Study Habit (N=141)	
	Yes	No	Yes	No
Have interest to contribute to mathematics discussions in class	12 (8.8%)	125 (91.2%)	65 (46.1%)	76 (53.9%)
Have interest to attend mathematics class	93 (67.9%)	44(32.1%)	127 (90.1%)	14(9.9%)
Have interest to do mathematics assignments	26 (19.0%)	111(81.0%)	82 (58.2%)	59 (41.8%)
Have confidence when writing mathematics examinations	55 (40.1%)	82 (59.9%)	112 (79.4%)	29 (20.6%)
Academic performance in Mathematics has improved	31 (22.6%)	106 (77.4%)	83 (58.9%)	58(41.1%)

Source: Field Data (2018)

From Table 4.6, the results show that students with good study habit had higher interest to contribute to Mathematics discussions in class, interest to attend Mathematics class, interest to do Mathematics assignments and had higher confidence when writing Mathematics examinations than those with bad habits towards studying of Mathematics. Moreover, those with good study habit had higher performance in Mathematics than those with bad habit towards studying of Mathematics.

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The study further asked the teachers whether study habit influence performance of students in Mathematics and the responses are shown in Figure 4.4.

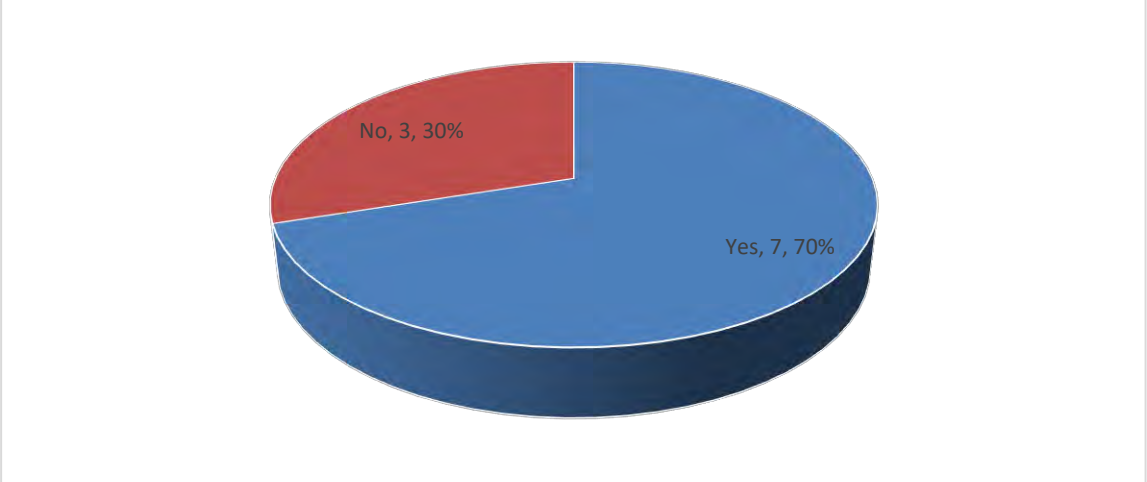

Figure 4.4: Does Study Habit Influence Performance in Mathematics

Source: Field Data (2018)

The results in Figure 4.4 show that majority (70.0%) of the respondent noted that study habit influence performance in mathematics whilst the remaining (30.0%) noted otherwise. Those who indicated that study habit influence performance gave as below to buttress their views.

i. Students with good study habit attend classes very often;

ii. Students with good study habit ask question in class than those with bad habits

iii. Students with good habits try always to answer questions during class discussions than those with bad habit.

iv. Students with good habits always do their assignments than those with bad study habit

v. Students with good study habit revise their notes before class begins.

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CHAPTER FIVE

DISCUSSIONS

5.1 Introduction

This chapter discusses the findings of the study. The discussion is done in accordance with the arrangement of the objectives of the study. It however, first discussed

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the characteristics of the respondents to form the basis of the entire discussions presented in this chapter.

5.2 Characteristics of respondents

From the findings, female were more than the male respondents for the students. This suggests that female students outnumbered the male students in Junior High Schools in Kumasi Metropolis. Females in general have less interest in Mathematics as compared to male students. This suggests that with majority of students as females, the Mathematics teachers have go extra miles to inculcate the interest of learning Mathematics into the students.

The next group of respondents were teachers. The males were more than the females**.** This suggests that male mathematics teachers outnumbered the female teachers in Junior High Schools in Kumasi Metropolis. This is because, males are generally good at Mathematics and therefore have higher interest to pursue Mathematics at tertiary level to become teachers in Mathematics. teaching mathematics than that of the females.

It was also observed that male Mathematics Teachers were relatively older than the female Mathematics Teachers. In general, teachers were youthful; hence energetic with less family responsibilities and they could work hard to improve teaching and learning of Mathematics in the metropolis if they were well motivated. This finding is consistent with data from Kumasi Metropolis Education Service (2018) which indicates that most of Junior High School Mathematics Teachers are males in their youthful ages between 25 years and 45 years.

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The number of female Mathematics Teachers was little lower than male Mathematic Teachers This suggests that females are now developing the interest for teaching of Mathematics at the Junior High School level. Considering sex distribution of the students, the increasing number of female Mathematics Teachers will have great impact in teaching and learning mathematics in schools. This is because, these female Mathematics Teachers would serve as role model to the female students and other students and would encourage many more female students to develop positive attitudes towards learning of Mathematics.

5.3 Study habits of students towards Mathematics

The findings of this study indicated that respondents (students) exhibited sign of positive attitudes towards studying of Mathematics. Students in junior high schools in the Kumasi Metropolis have developed a positive attitude toward Mathematics class attendance. Katelyn (2013) noted that students with positive attitudes towards studying of Mathematics attend classes at all times. Class attendance is very necessary since students are in classrooms. Therefore, students who attend Mathematics class at all times have better understanding of Mathematic topics and concepts than those who do not. It is not enough to just attend class, it is important also for the students to be attentive in class and asked questions.

Aside regular class attendance, the respondents prefer to study Mathematics in quite environment. The students have developed a habit to study Mathematics in a quite environment in order to have full concentration on their studies. Good and quite study environment without internal or external distractions can help students to have full

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concentration (Puma-at & Hamed, 2016). This suggest that how the school system is organized regarding structural layouts, architectural designs allowing adequate ventilation, lighting system, seating arrangements, curriculum design and time management as well as access to adequate teaching and learning materials may have impacts on the study habit. Good environment within this context can thus lead to positive study habits and poor environment can have adverse consequences.

However, students did not like to ask questions during class hours. This clearly shows that teaching of Mathematic is not much interactive and students were much of concern about writing of the notes than to understand the topic. Asking of questions helps to better understand the topic taught and this makes revision easier.

The failure to ask questions is partly due to unpreparedness of the students before class begins. The study established that most of the students do not revise their Mathematics notes. Attending class to write notes is not enough to understand the topic taught. Students need to revise the topic taught for better understanding (Kayely, 2013; Harper & Row, 2009). Most student fail to revise their Mathematics notes due to many reasons such frequent watching of television programmes and heavy household chores which make them too tired to study in the evenings or at night. Moreover, Kim, (2008) and Boado (2012) have identified the importance of learning material in the revision of Mathematics. When students lack Mathematics textbook as a study guide, learning or revision becomes very difficult, discouraging many to revise their notes or read further on topics taught in school. Many students resorted to solving of past questions rather test books to better understand the topics. Solving of past question without understanding of

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the concepts promote rote learning where students learning by chew the answers to questions. Personal time table is essential in personal studies at home.

5.4 The Challenges Students Face in the Study of Mathematics

Though the result showed that availability of Mathematics textbook is not a challenge to the students in terms of studying mathematics in the junior high level, the textbooks are given to students to use during school hours but not after school or during vacations. This does no promote revision or personal studies after school hours. Aside, printed textbook, mobile devices could be used to source of learning materials on-line to enhance learning on Mathematics at homes (Neal & Hooft, 2006). However, it seems Ghanaian Junior High School students have not developed technologically to a level here they could use technological devices like mobile phones to study; hence printed textbooks are the only reliable learning material at homes and schools. Therefore, lack of access to printed textbooks at homes makes learning of Mathematics difficult at homes.

That is television at home distract the students from studying Mathematics in their various homes and the makes it a challenge. Pool et al. (2003) has noted that learning of Mathematic and watching of television do not go together. They emphasized that students who do their homework whiles watching television significantly performed more poorly and slowly than those students who do their homework with music and radio. Thus, with increasing television programmes, learning of Mathematic has become more difficult than before.

The respondents further indicated that the use of Mathematics jargons and symbols permeate throughout teaching and this tend to confuse majority of the students. Most

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teachers use these jargons just to show off their competence in Mathematics. Knowing Mathematics and teaching Mathematics are not same, though one needs to be good in Mathematics before he or she can teach Mathematics. Mathematics teacher needs to breakdown and simplify topics and concepts for an average student to understand what is being taught. However, many Mathematics teachers fail to do this but just use jargons and words that tend to confuse students. Belardi (2013) has indicated that Mathematics notes should be made up of diagrams for easier reading and interpretation when necessary, note heading, main points, formulas, figures, images, colours when necessary. However, the students noted these were not done by majority of the teachers, making notes very difficult to read and understand.

Teachers respondents tested that available of Mathematics textbook, large class size, time allocation for teaching of Mathematics were challenges. Class size is very important in teaching of Mathematics. The teachers noted that class sizes were large to the extent that most of the students are ignored in the course of teaching. Some classes are about 70 students and or 60 students far more than the recommended class size of 40 students by Ministry of Education and Ghana Education Service. Larger class undermines number of assignments and class exercises given to students. This consequently undermines effective assessment of students' understanding of topics taught in class, leading low understanding and low interest in studying of Mathematics by majority of students.

5.5 Effects of Attitudes towards Studying of Mathematics on Academic Performance

The study noted that students with good study habit were regular to class, ask question and do exercises and assignment and these help them get better understanding of

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topics taught in class and thereby perform better in examinations. The results of this study are consistent with findings of many previous studies (Tope, 2011, Monica, 2015; Mashayekhi, et al., 2014; Akpan &Salome, 2015; Ebele & Olofu, 2017; Ebele & Olofu, 2017). For example, Monica, (2015) found positive relationship between study habit and academic achievement of students in Home Economics in junior secondary schools in Enugu State, Nigeria. Also, Mashayekhi, et al. (2014) found positive relationship between study habit and academic achievement of undergraduate students of Islamic Azad University Jiroft Branch.

CHAPTER SIX

FINDINGS, CONCLUSION AND RECOMMENDATIONS

6.1 Introduction

This chapter highlights the summary of findings, conclusion and recommendations based on the findings.

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6.2 Summary of Findings

The summary of findings as grouped under each objective of this study.

6.2.1 Study Habits of Students

The study found out that majority of the students attended all Mathematics classes, solving mathematics past questions, learning or studying of mathematics in quite place or environment, doing mathematics exercises without coping from others and having personal mathematics textbooks.

However, study revealed that majority of students did not revise their Mathematics notes as required, did contact Mathematics teacher or colleagues for help on difficult topics and did not asked questions in class.

The study revealed that number of students with good study habits towards Mathematics was 2.8% higher than those with bad study habit.

6.2.2 Challenges to the study of mathematics

The study found out those television programmes, the nature of mathematics notes given by the teacher, frequent use of mathematics jargons and symbols and Mathematics textbook were key challenges to the study of Mathematics at homes. Among the challenges, television programmes was the dominant challenge in all homes.

Mathematics Teachers in the selected schools in the metropolis identified inadequate mathematics textbook, larger class sizes and small time allocation for the Mathematics on the school timetable as a challenge to hinder effective teaching of Mathematics

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6.2.3 Effects of study habit on academic performance

The study revealed study habit influenced the performance of students in Mathematics. Those with good study habits performed better in Mathematics than those with bad study habit. Good study habits made the students confidents in examinations, gave students better understands of Mathematical concepts and were serious to studies. These resulted in better performance in Mathematics.

Teachers confirmed that students with good study habit contributed to Mathematics discussions, had interest to attend mathematics class always, did mathematics assignment, had confidence when writing Mathematics examinations and had higher academic performance than students with bad study habits.

6.3 Conclusions

The study investigated the study habits of students in Mathematics in selected Junior High Schools in the Kumasi Metropolis. The study based on the findings concludes that students with good study habits towards Mathematics are more than those with bad study habits by 2.8%. It clearly raises a major concern regarding how to improve study habits of students. This conclusion reflects the view of Watson (1976) that students develop negative attitudes towards mathematics as they move from lower classes to upper classes. He notes that students' attitudes towards mathematics are usually positive in early years of primary schooling but these decreases as they progress to upper classes.

The study further concludes that majority of the students attend Mathematics classes, solve Mathematics past questions, study Mathematics in quite environment, do

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Mathematics exercises without coping from others and have personal Mathematics textbooks. However, many students do not revise their Mathematics notes as required, do contact Mathematics teacher or colleagues for help on difficult topics and do not ask questions in class.

The study concludes television programmes pose the greatest challenge to students' study of Mathematics at homes. This challenge was also identified by Pool et al. (2003) by noting that students perform poorer in Mathematics due to watching television. Home environment is critical to the study of Mathematics and this study environment is affected negatively by noise or any that distract attention like television and radio.

The study finally concludes that study habit is noted by both students and teachers to influence performance in Mathematics. Students with good study habits perform better in Mathematics than students with bad habits.

6.4 Recommendations

This study on the basis of the findings recommends as follows;

1. Creating conducive learning environment at home. The study identified television programmes as posing challenge to the study of Mathematics. This study recommends that parents should be educated on when to allow their children to watch television at homes and when to put on television if children live with parents in the same room. This sensitization will go a long way to reduce distractions at when and pave way for good learning environment for study Mathematics at homes.

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2. Encouraging Mathematics class attendance. Most students do not attend Mathematics class leading to poor understanding of Mathematical concepts. The study recommends that all Junior High Schools should have students class monitoring register for monitoring attendance of Mathematics. This will easily help teachers and school management to identify students who absent themselves from Mathematics Class. All such students can then be counseled to put up good attitude towards Mathematics class attendance.
3. Solve more examples of mathematics questions with students in class. There is a say that practice makes man perfect. This study therefore recommends that Mathematics Teachers should solve more questions on each topic or sub topic to help easier understanding of concepts. As teachers solves Mathematics questions with students, learn how to apply what they are being taught; thereby motivate them to study and solves Mathematical problems by themselves.
4. Encouraging students to ask questions in class. One of the ways through which students get better understanding of Mathematics topics or concepts is when they ask question for clarification for explanations. Also, asking questions by students and teachers encourages class participations which enhances understanding. The study therefore recommends that teachers should encourage their students to ask questions in class. Moreover, teacher should try as much as possible to exercise patience no matter the nature of the question asked and also try to answer each question asked by students. This when done effectively will promotion students' participation in class and interest in Mathematics.

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5. Encouraging smaller class size. Teachers teach well when class size is manageable. Teaching includes marking of exercises and assignments and supervision of group work. Therefore for teacher to be effective in helping both students with good and bad habits towards, class size in Junior High School should be consistent with recommended class size by Ministry of Education and or Ghana Education Service.

REFERENCES

Adeninyi V (2011). *Studying to pass: Implication for students*. Lagos: Macmillan.

Agba R (2013). *Why Students must Develop Study Habits*. Calabar: Rixmas Publishing Company.

Akpan, N. A., & Salome, E., (2015). Effect of study habit on academic achievement of Agricultural Science Students in Senior Secondary Schools in Emohua Local Government Area of Rivers State, Nigeria. *International Journal of Education and Evaluation*, *1*(8), 25-34.

Aremu, A. O. (2000). *Academic performance 5 factor inventory*. Ibadan: Stirling-Horden Publishers.

University of Education, Winneba http://ir.uew.edu.gh

Ashish R (2013). *Study habits for students: Bad ones to avoid, Good ones to achieve success*. www.education.wisc .education/soe/news- events.

Atsiaya siahi, E., & Maiyo, J. K., (2015). Study of the relationship between study habits and academic achievement of students: A case of Spicer Higher Secondary School, India. *International Journal of Educational Administration and Policy Studies*, *7*(7), 134-141.

Attewell, J. (2005). *From Research and Development to Mobile Learning. Tools for Education and Training Providers and Their Learners*. Presented at the mLearn 2005: 4th World Conference on Mobile Learning, Cape Town, 25-28 October 2005.

Atuahene,S.(2013). Effective leadership- an it perspective. *Online Journal of Distance Learning Administration*, *2*(2), 119-128

Baquiran, L. A. (2011). Study Habit and Attitudes of Freshmen Students: Implications for Academic Intervention Programs. *Journal of Language Teaching and Research*. *2*(5), 1116-1121.

Bashir , I., & Mattoo, H. (2012). A Study on Study Habits and Academic Performance Among Adolescents (14-19) Years. *International Journal of Social Science Tomorrow*, *1*(5), 1-5.

Belardi, B. (2013). *Texting while studying*. USA: McGraw-Hill Education.

Bell, F. H. (1980). *Teaching Elementary School Maths, Methods and Content,* McGraw-Hill Education, USA.

Benedicto, B. (2013). *Factors that affect study habits of grade one students of Aluarte Elementary School*. Lumbia, Cagayan de Oro.

University of Education, Winneba http://ir.uew.edu.gh

Boado, N. (2012). *Factors Influencing the Academic Performance in Physics of DMMMSU-MLUCLaboratory High School*. Don Mariano Marcos Memorial State University, La Union, Philippines.

Borzekowski, D. L., & Robinson, T. N. (2005). *The Remote, the Mouse, and the No. 2 Pencil: the Household Media Environment and Academic Achievement Among the Third Grades.* researchgate.net/publication/7747316

Brown, T. (2005). *Towards a Model for M-learning in Africa*. International JI. On E-learning 2005;4(3):299-315.

Carey, B. (2015). *The surprising truth about how we learn and why it happens*. New York: Random House.

Cary, J. Roseth, W. J., David, T., & Roger, J. (2008). Promoting early adolescents‟ achievement and peer relationships: The effects of cooperative, competitive, and individualistic goal structures. *Psychological Bulletin*, *134*(2), 223–246.

Cavallo F, et al. (2010). *Studio HBSC in Italia (Health Behavior in School-aged Children*).

Cerma, M. A., & Pavliushchenko, K. (2015). Influence of Studying Habit on Academic Performance of International College Students in Shanghai. *Higher Education Studies, 5*(4), 42-56.

Credé, M. A. (2008). The Third Pillar Supporting Collegiate Academic Performance, *Perspectives on Psychological Science*, 3(6), 425-453.

Crede, M. &Kuncel, N. (2008). *Study habits meta-analysis*, *Perspectives on Psychological Science in Press, 3*(6), 425-453.

Demir, S., Kilinc, M., & Dogan, A. (2012). The Effect of Curriculum for Developing Efficient Studying Skills on Academic Achievements and Studying Skills of

University of Education, Winneba http://ir.uew.edu.gh

Learners. *International Electronic Journal of Elementary Education*, 4 (3): 427-440.

Dewey, A. (2010*): A study of the relationship among selected factors affecting Kentucky teacher's instructional technology use in the elementary classroom*. University of Kentucky: Dissertations Abstracts International, 48/12A, 3094 (186pp).

Diaz, A. L. (2003). Personal, family, and academic factors affecting low achievement in secondary school. *Electronic Journal of Research in Educational Psychology and Psycho pedagogy*, 1 (1), 43–66.

Dimbisso, T. S. (2009). *Understanding Female Students' Academic Performance*: *An Exploration of the Situation in South Nations Nationalities and Peoples Regional State – Ethiopia*. A Research Paper Presented in Partial fulfillment of the Requirements for obtaining the degree of Masters of Arts in Development Studies, International Institute of Social Science, The Hague, The Netherlands.

Ebele, U. F., & Olofu P. A., (2017). Study habit and its impact on secondary school students' academic performance in biology in the Federal Capital Territory, Abuja. *Educational Research and Reviews*, 12(10), 583-588.

Federal Republic of Nigeria (2013). *National Policy Education*.

Gall, M., Grix, J., & Creswell, P. (2007). *The foundations of research.* London, Palgrave.

Gemmill, E., & Peterson, M. (2006). *Technology Use Among College Students: Implications for Student Affairs Professionals*. NASPA J 2006;43(2):280-300.

Good, C. V. (1998). *Dictionary of education*, (3rd ed.). New York: McGraw Hill Book Company.

University of Education, Winneba http://ir.uew.edu.gh

Grace, F. (20 13). *Would Group Study Improve Your Grades*? Retrieved from www.about.com.

Gracia, L. A. (2003). A quantitative exploration of student performance on an accounting program of study. *Accounting Education: An International Journal*, 12(1), 15-32.

Hall, M. R. (2004). Changing the learning environment to promote deep learning approaches in first year accounting students. *Accounting Education*, *13*(4), 489-505.

Harb, N. & El-Shaarawi, A. (2006). Factors affecting students' performance. *Journal of Business Education, 82*(5), 282-290.

Harpe T, Row A (2009). *Effective study habits*. Retrieved fromwww.arbeitsblaetter.com.

Harper & Row School of Education, (2010). *Communiqué of the 5th School of Education, FCE Zaria National Conference on Education as an Instrument for Global Change Issues and Challenges.* Zaria Federal College of Education. July, 5th – 8th.

Hassanbeigi, A. (2011). The Relationship between Study Skills and Academic Performance of University Students. *Procedia-Social and Behavioral Sciences*, 30 (1), 1416-1424.

Hollinger T., Gall, M., Grix, J. (2013). *Qualitative research in education: Interaction and practice.* London, Sage Press

Husain, A. (2000). *Developing study habits.* Wikipedia, the free encyclopedia.

Hussain, A. (2006). Effect of Guidance Series on Study Attitudes Study Habit and Academic Achievement of Secondary Students. *Bulletin of Education and Research* 28 (1): 35 – 45.

University of Education, Winneba http://ir.uew.edu.gh

John M (2010). *Students Study Habits and Styles*. Retrieved fromwww.worldwidelearn.com.

Kahari, L. (2013). The Effects of Cell Phone Use on the Study Habits of University of Zimbabwe – First Year Faculty of Arts Students, *International Journal of Education Research,* 1(10), 88-90

Katelyn, F. (2013). *College Study Habits News*. Retrieved fromwww.studymode.com/essays.

Kobaland, D., & Musek, J. (2001). Self-concept and academic achievement: Slovenia and France. *Personality and Individual Differences*, *30*, 887-899.

Marc, K. (2011). *The Importance of Good Study Habits*. Retrieved from www.answer.com.

Mark, A., & Howard, C. (2009). How to study. *Psychological Sciences*, 20(4):516-522.

Mark, G. & Arnley, J. (1999). School achievement and labour market outcome Australian National University - Center for Economic Policy Ugam. IDEAS RePEC data.

Marpa, E. (2008). Correlation among Time Management, Study Habits and Academic Achievement of the Math Major Students, *International Journal of Education Research,* 1(1), 1-11.

Mashayekhi, F., Rafati, S., Mashayekhi, M., Rafati, F., Mohamadisardoo, M. R. & Yahaghi, E., (2014). The relationship between the study habits and the academic achievement of students in Islamic Azad University of Jiroft Branch. *International Journal of Current Research and Academic Review*, Number 6 (June-2014), 182-187

Monday, M. (2008). *Ten bad study habits you should resolve to avoid*. Retrieved from www.ca1newport.com.

University of Education, Winneba http://ir.uew.edu.gh

Monica, O. E., (2015). Influence of Study Habits on the Academic Achievement of Students in Home Economics in Junior Secondary Schools in Enugu State. *International Journal of Innovative Education Research*, *3*(4), 15-22.

Nikki K (2013). *Common Bad Study Habits*. Retrieved from www.newa4j ax.com.

Nneji L. M. (2002). *Study Habits of Nigeria University students*. Nigerian Educational Research and Development Council Abuja, Nigeria.

Orton, A. (1987). *Learning Mathematics: Issues, theories and classroom practices.* London: Cassell.

Palani, K. (2012). Promising Reading Habits and Creating Literate Social. *International Reference Research Journal*, 3(1) 91.

Pogue, F. (2000). *A correlation on the Study Habits of Second Year Students in Special Science Curriculum and Basic Education Curriculum of Dasmarinas National High School*, Dasmarinas National High School. (Online) Available: http://www.scrib.com/doc/36169584/

Pool, M. M., Koolstra, C. M., & Van Der Voort, T. A. (2003). Distraction Effects of Background Soap Operas on Homework Performance: An Experimental Study Enriched with Observational Data. *Educational Psychology*, 23(4), 361-380.

Poscia, A. (2015). Study Habits and Technology Use in Italian University Students. *Ann Ist Super Sanità*, *51*(2), 126-130.

Puma-at. R., & Hamed, M., (2016). Study Habits of Business Students Towards Achieving Academic Performance. *International Journal of Liberal Arts and Social Science, 4*(5), 122-131.

University of Education, Winneba http://ir.uew.edu.gh

Ramamurti P. V., (1993). *Developing Good Study Skills,* Keynote Address Delivered at DIET Psychology, Held at Karretnagar on 17th July, 1993.

Rana, S., & Kausar, R. (2011). Comparison of Study Habits and Academic Performance of Pakistani British and White British Students. *Pakistan J. Social and Clinical Psychol, 9*, 21-26.

Richard, R. (2000). The way we were: The myths and realities of Americas student achievement. Economic Policy Institute/acs - VT 2000.

Robinson, C. A. (2010). *Coaching Students to Academic Success and Engagement on Campus*. About Campus, 26-29. http://dx.doi.org/10.1002/abc.20032

Rukangu, S. M. (2000). *Pupils development of spartial ability in Mathematics: An issue of learning environment in selected Secondary Schools in Kenya*." Nairobi. Unpublished PhD thesis, Kenyatta University

Sadia. B, (2005). *A Study of the Factors Affecting the Performance of the Students in Government Secondary Schools for Girls in Rawalpindi city M. A. Edu*. Thesis, Faculty of Education, International Islamic University, Islamabad.

Satapathy 5 & Singhal (2000). Mental Health of Visually and Hearing Impaired Adolescent. *Journal of Personality and Clinical Studies* 16(2): 119 – 127.

Schofield, R. (1999). *Staff Attitudes To The Development And Delivery Of E-Learning*. New Library

Shaftel, J. (2005). The influence of effective teaching in accounting on student attitudes, behavior, and performance. *Issues in Accounting Education*, *20*(3), 231-246.

Sidhu, J. (2003). Mission statements: is it time to shelve them? *European Management Journal, 21*(4), 439-46

University of Education, Winneba http://ir.uew.edu.gh

Simpson, J. A., & Weiner E. S. C. (1989). *The oxford English dictionary* (2nd ed.). Oxford: Clarendon Press.

Stinebrickner, R., & Stinebrickner, T. R. (2008). The Causal Effect of Studying on Academic Performance, *The B.E. Journal of Economic Analysis & Policy*, 8(1), 1–55.

Taiwo, C (1972). Mathematics *Teaching in Schools.* London: Commonwealth Secretariat

Taneja, V. R. (2003). *Socio-philosophical approach to education*. New Delhi: Atlantic Publishers and distributors.

Tope, O. (2011). *The Effects of Study Habit on the Academic Performance of Students: A Case Study of Some Secondary Schools in Ogun State*. Published online by: Egobooster Books.

Tschumper, K. S. (2006). *Study skills instruction in High School Where O" Where the High School Students Study Skills Gone*? Published by the University of Wisconsin, La Crosse Onalaska Community, USA.

Venturina, G. (2014). *Factors Affecting the Study Habits of the Students*. (Online)

Verma, B. P. (1996). Test anxiety and study habits. A Study of their Main and Interaction Effect on Academic Achievement. *Indian Journal of Applied Psychological*, *33*(2), 55-61.

Verma, S., & Kumar R., (1999). A correlation study between study habits and achievement in different school courses. *Indian Journal of Psychometry and Education, 30(*1), 53-56.

University of Education, Winneba http://ir.uew.edu.gh

Vyas A., (2002). *A Study of Learning Style Mental Ability, Academic Performance and other Ecological Correlates of Undergraduate Adolescent Girls of Rajasthan*. Unpublished Ph.D Thesis in Education, Meerut: Ch. Charan Singh University.

Ward, A., Stoker, H.W., & Murray-Ward, M. (1996*). Achievement and ability tests - Definition of the domain, educational measurement*, University Press of America.

Watson, F. R. (1976). *Development in Mathematics teaching*. London: Open Books.

Werner, S. (1970). *The PQRST Method of Studying*. Stangl-Taller. at. Robinson, Francis Pleasant. Effective study. New York: Harper & Row.

Yadav, S., Ansari, R., & Savant, A. (1999). A critical analysis of study habits and academic achievement of College Students. *Karnataka Journal of Agricultural Sciences*, *13*(4), 914- 916.

Zimmerman, B. J. (2000). Attaining self-regulation: A social-cognitive perspective. In M. Boekaerts, P. R. Pintrich, and M. Seidner (Eds.), *Self-regulation: Theory, research, and applications.* Orlando, FL: Academic Press.

University of Education, Winneba http://ir.uew.edu.gh

QUESTIONNAIRE

UNIVERSITY OF EDUCATION WINNEBA

COLLEGE OF TECHNOLOGY EDUCATION, KUMASI

DEPARTMENT OF EDUCATIONAL LEADERSHIP

QUESTIONNAIRE FOR STUDENTS

This questionnaire is design to find out the influence of study habit on academic performance of students in mathematics in the Weweso Circuit of Kumasi Metropolis. Please answer the question frankly and objectively. The information you provide will be treated confidently. Thank you for your participation.

SECTION A: PERSONAL DATA

1. Sex: a) Male [ ] b) Female [ ]

SECTION B: STUDY HABITS

Indicate the extent of agreement or disagreement to statements below that relate to your study habit in mathematics. Use the scale below:

1=Strongly disagree; 2=disagree; 3=neutral; 4=agree and 5=strongly agree

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No.	Statements	1	2	3	4	5
2	Attend all mathematics classes					
3	Revise mathematics notes daily					
4	Ask for help on contact topics/ sub-topics that are difficult					
5	Ask questions in class					
6	Solve past questions					
7	Study in quite environment					
8	Study mathematics by solving questions or examples with help of foam maker board and pencil or book and pen					
9	Have a study group for mathematics					
10	Do all mathematics without coping from others					
11	Have a personal mathematics textbook					

SECTION C: CHALLENGES TO THE STUDY OF MATHEMATICS

SECTION B: STUDY HABITS

Indicate the extent of agreement or disagreement to statements below that relate to challenge you face when studying mathematics. Use the scale below:

1=Strongly disagree; 2=disagree; 3=neutral; 4=agree and 5=strongly agree

No.	Statements	1	2	3	4	5
12	Mathematics textbook as guide for home studies					
13	Television at home					
14	Mathematics notes given by the teacher					
15	Understanding of symbols used in mathematics textbook					
16	Understanding of word used by the teacher					
17	House chores					
18	Assistance to parents/ guardian in economic activity					
19	Study place at home					

SECTION D: INFLUENCE OF STUDY HABIT ON ACADEMIC PERFORMANCE

The following statements relate to the influence of study habits on academic performance. In a continuum of strongly agreed to strongly disagreed, indicate the extent of your agreement or disagreement to each of these statements.

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1=Strongly Disagree; 2= Disagree; 3= Neutral; 4=Agree; 5= Strongly Agree

No.	Statement	1	2	3	4	5
20	Have interest to contribute to mathematics discussions in class					
21	Have interest to attend mathematics class					
22	Have interest to do mathematics assignments					
23	Have confidence when writing mathematics examinations					
24	Academic performance has improved					

25. State your end of term examination score for mathematics in the following terms

No	Subjects	First term of 2017/2018 academic year	Second term of 2017/2018 academic year	Third term of 2017/2018 academic year
25	Mathematics			

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UNIVERSITY OF EDUCATION WINNEBA

COLLEGE OF TECHNOLOGY EDUCATION, KUMASI

DEPARTMENT OF EDUCATIONAL LEADERSHIP

QUESTIONNAIRE FOR TEACHERS

This questionnaire is design to find out the influence of study habit on academic performance of students in mathematics in the Weweso Circuit of Kumasi Metropolis. Please answer the question frankly and objectively. The information you provide will be treated confidently. Thank you for your participation.

SECTION A: PERSONAL DATA

1. Sex: a) Male [ ] b) Female [ ]
2. Age: a) between 20 and 30 years [ ] b) between 31 and 40 years [ ] c) between 41 and 50 years d) above 50 years [ ]
3. Educational level: a) Certificate [ ] b) Diploma [ ] c) First Degree d) Master Degree [ ]
4. Number of Years taught in the school: a) below 5 years [ ] b) between 5 and 10 years [ ] c) between 11 and 15 years [ ] d) above 15 years [ ]

SECTION B: CHALLENGES TO THE TEACHING OF MATHEMATICS

5. Which of the following is a major challenge to the teaching of mathematics in the school?

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a) Mathematics textbook as a guide [ ] b) Low students interest [ ] c) Larger class size [ ] d) Small time allocation for mathematics on the school time table [ ]

6. Provide explanation to your answer in Q5.

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SECTION C: INFLUENCE OF STUDY HABIT ON ACADEMIC PERFORMANCE

7. How would you describe the study habit of your students?
   a) Good study habit [ ] b) Bad study habit [ ]
8. Does study habit influence students' academic performance in Mathematics?
   a) Yes [ ] b) No [ ]
9. If yes, provide three reasons.
   i. ……
   ii. ……
   iii. ……
10. If no, provide three reasons.
    i. ……..
    ii. ……..
    iii. ……